

## **Aerosol Properties Over Dark Water from MISR Multi-Angle Imaging**

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The Multi-angle Imaging SpectroRadiometer (MISR) was launched into a 10:30 AM, sun-synchronous, polar orbit aboard the EOS Terra spacecraft on December 18, 1999. MISR measures upwelling radiance from Earth in 4 spectral bands centered at 446, 558, 672, and 866 nm, at each of 9 viewing angles spread out along the flight path from 70.5 degrees forward to 70.5 degrees aft. We will use the data to characterize aerosol properties over land and water, surface albedo and bi-directional reflectance, and cloud properties.

Aerosol retrieval simulation studies show that with MISR data, under good observing conditions, we should be able to distinguish particle properties over dark water far better than with previously available global data. Our generic retrieval constrains column-mean cross-section-weighted aerosol optical depth, effective size distribution, shape, and indices of refraction (Kahn et al., 1998; 1997). An alternative climatological retrieval interprets MISR observations in terms of distinctions among mixtures of assumed, climatologically likely, pure particle types (Kahn et al., 1999). Results will be presented from observations taken over Monterey Bay by the AirMISR aircraft version of the MISR instrument, along with preliminary MISR dark water aerosol studies over the Chesapeake Lighthouse station. From these data, we will begin assessing the effectiveness of MISR multi-angle observations to track movements of air masses containing different particle mixtures over dark water.

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